GE Puerto Rico Investment Incorporated

EPA ID Number: PRD090492109

Other (Former) Names of Site

Industrial Control of Puerto Rico, Caribe General Electric Products - Patillas

Site Description

The GE Puerto Rico Investment Inc. (GE) facility is located along State Road 3 at kilometer 122.9, in Patillas. The facility was purchased by Caribe GE Products - Patillas in 1974 from the Kaiser Roth Corporation, and operated by Caribe GE until 1987. The plant was reopened in 1993 with its name changed from Caribe GE Products - Patillas to GE Puerto Rico Investment Inc., and has been involving manufacturing of electro-mechanical devices.

The manufacturing processes before 1987 included metal electroplating, stamping and cutting operations. GE used a number of industrial chlorinated solvents in their manufacturing process and also generated wastewater containing metals. The area surrounding GE is largely used for agriculture, mostly for growing sugar cane. To the east of the facility, there is some residential development.

Site Responsibility

The cleanup at this site is being addressed by the U.S. Environmental Protection Agency (EPA), under authority of the Resource Conservation and Recovery Act (RCRA). However, the Puerto Rico Environmental Quality Board (EQB) also participates with EPA in cleanup decision-making and oversight.

Threats and Contaminants

There are two areas at GE which are possible threats to the environment. One of these is the former location of a French Sump, a rock filled pit with a concrete cover. This pit was used from 1977 to 1980 for disposal of a significant quantity (perhaps more than 10,000 gallons) of oils and solvents. These contaminants present a threat to the groundwater aquifer underneath the facility. This threat is magnified by the fact that the local aquifer has been used for the public water supply. In fact, in 1985, a PRASA well for public drinking water (200 feet down gradient hydro-geologically from the GE facility)

was shut down because of the elevated levels of DCE, the same types of solvents used by GE, were discovered in the water. Groundwater monitoring wells were installed to observe if the contaminants from the French Sump were migrating. These wells provide further evidence that chlorinated solvents have been moving down-gradient from the source location.

Another possible source of contamination at the site are two sludge drying beds. GE generated wastewater contaminated with metals from its electroplating operations. It operated a wastewater treatment system to treat the wastewater before disposal. This treatment operation in turn generated metals-contaminated sludge that was treated in the sludge drying beds prior to disposal. The sludge drying beds were taken out of service in 1982 and GE began a formal closure of the beds in 1983. Part of the closure process for the beds involved an installation of a groundwater monitoring well system. Data from these wells indicate elevated levels of chromium in the groundwater near the sludge drying beds.

CLEANUP APPROACH

Cleanup Status/Corrective Action

The site is being addressed by GE, under EPA oversight, in two measures: Interim Corrective Measures and long-term corrective measures directed at the cleanup of the entire site.

Response Action Status

Interim Corrective Measures (ICMs)

The French Sump and some of the surrounding soil were removed from the facility in 1990. The intent of the ICM was to remove the source of the organic solvent contamination in the groundwater. Following the removal, the site of the sump was inspected and filled back in with soil.

Entire site

GE has been subject to several investigations over the years, culminating in the completion of a RCRA Facility Investigation (RFI) in 1991. The RFI called for the installation of a groundwater monitoring well network in order to determine the extent of migration of the chlorinated solvents from the French Sump in the groundwater. Following completion of the RFI, work began on a Corrective Measures Study (CMS) to evaluate possible methods of remediation to address the groundwater plume of chlorinated solvents.

However, based upon careful studies by both EPA contractor and EPA's own experts of past investigations and data collected so far, EPA now comes to the conclusion that currently available knowledge of the plume is inadequate, especially at off-site locations.

If the extent of the contaminant plume is not fully defined and the migration paths are not clearly defined, then the effectiveness and reliability of the corrective measures as proposed in the draft CMS in protecting human health and the environment are questionable and uncertain. In other words, since the delineation of the plume is a prerequisite for a useful CMS, the CMS is now put on hold until satisfactory understanding has been achieved regarding site and plume characterization. As of March 2003, a supplemental investigation work plan including installation of additional wells is being developed.

Cleanup Progress

After the Interim Corrective Measures (ICM) to remove the French Sump was completed, contamination levels in the groundwater should improve over time. The groundwater monitoring network installed to monitor the chlorinated solvents. The plume is sampled quarterly. This data is used to determine if the source of the chlorinated solvents, the former French Sump, has been fully remediated. The monitoring data is also used to evaluate the contaminated plume itself, to see if it is improving or worsening over time.

Excavation of a stabilized sump.

Weighting bags filled with a stabilized sump.

Transport of a stabilized sump.

The completed RCRA Facility Investigation (RFI) indicates that there are chlorinated solvents (i.e., DCE and TCA) migrating away from the location of the former French Sump. While the Corrective Measures Study (CMS) is only in a draft stage, there are several suggested remedies to address the groundwater plume. CMS is now put on hold until satisfactory understanding has been achieved regarding plume characterization.

Permit Status

GE has never held an operating permit. When the facility was active, GE operated under interim status. When GE decided to close their sludge drying beds in 1983, they were required to develop a closure plan to ensure that the sludge drying beds did not constitute a threat to the environment. This closure plan was approved in 1987 and

called for removal of the sludge and installation of another groundwater monitoring well network specific to this area. In the final year of monitoring, there was evidence of elevated chromium levels in the groundwater both up-gradient and down-gradient of the sludge drying beds. An additional round of sampling proved inconclusive. At this point, EPA has not granted closure for this unit. Further sampling may be required before closure is granted.

Site Repository

Copies of supporting technical documents and correspondence cited in the fact sheet are available for public review at the following location:

U.S. Environmental Protection Agency, Region 2
RCRA Records Center
290 Broadway, 15th Floor, Room 1538
New York, New York 10007-1866
Telephone: (212) 637-3043